

*KHOLMATOV, A.*

Country : USSR

M

Category: Cultivated Plants. Grains.

Abs Jour: RZhBiol., No 22, 1958, No 100263

Author : Kosimov, D.; Kholmatov, A.

Inst : -

Title : Experiments in Securing Two Crops of Corn a Year on Irrigated Lands.

Orig Pub: S. kh. Tadzhikistana, 1957, No 7, 19-24.

Abstract: Conditions of the irrigated regions in Tadzhikistan permit obtaining two crops of corn in one vegetative period. The agricultural technique for the first and second plantings is set forth in detail. Early varieties have to be utilized to obtain two crops. The

Card : 1/2

Country : USSR

M

Category: Cultivated Plants. Grains.

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722210011-5"

Abs Jour: RZhBiol., No 22, 1958, No 100263

second planting, carried out on the 10th of July, produces a yield of grain of 17.7 centners/ha, and 53 centners/ha of dry vegetative roughage; the planting on the 20th of July - 15.9 and 110 centners/ha respectively; the planting on the 30th of July - 4 and 208 centners/ha respectively. -- O.V. Yakushkina

Card : 2/2

M-42

1. KHILMATOV, D.
2. U33 (600)
3. Cotton Growing - Tajikistan
7. Cotton plants set out separately in the rows, Khlopkovodstvo No. 6, 1951.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

KHOLMATOV, I. B.

KHOLMATOV, I. B. -- "The Effect of Stenosis of the Trachea and Throat on Stomach Functions." Min Health RSFSR. Moscow Medical Stomatological Inst. Moscow, 1956. (Dissertation for the Degree of Candidate in Medical Sciences).

So.: Knizhnaya Letopis', No. 6, 1956.

KAL'SHTEYN, Lev Iosifovich; KHOLMATOV, I.B., red.

[Hightmoritis in children]. Gaimorit u detei. Dushanbe, 1964.  
82 p. (Dushanbe. Gosudarstvennyi meditsinskii institut. Trudy,  
vol.64). (MIRA 17:7)

GREBENYUK, A.D.; KholmAtOV, M.; TSUKERVANIK, I.P.

Reactions of nitroolefins with aromatic compounds in the presence  
of acid catalysts. Part 1: Condensation of  $\beta$ -nitrostyrene with  
benzene in the presence of aluminum chloride. Zhur.ob.khim.  
32 no.8:2654-2657 Ag '62. (MIRA 15:9)  
(Styrene) (Benzene)

10

*Khol'mer, V. M.*  
*Co*

PRODUCTION AND PROPERTIES INDEX

Production of hydrocitronellal. O. Khol'mer. *Mosk. gos. univ. Izv.* 11, 379-80 (1960). The bisulfite compd. of citronellal was hydrated and then decompd. with NaOH, giving 50% of pure hydrocitronellal. Chas. Blanc

ASB. 15.4 METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND COLUMNS		3RD AND 4TH COLUMNS	
COMMON ELEMENTS		COMMON ELEMENTS	
<p>CA</p>		<p>17</p>	
<p>PROCESSES AND PREPARATION OF LAURALDEHYDE. S. S. Nalimkin and V. M. Kholmes. <i>Sistemy Dushistykh Veshchestv, Sbornik Statei</i> 1939, 56-7; <i>Khim. Referat. Zhur.</i> 1940, No. 4, 112.—The method of Sabatier and Meil was used to produce lauraldehyde. A mixt. of lauric and formic acid vapors was passed over <math>MnO</math>. Coconut soap was used as the starting material for producing fatty acids. Optimum conditions for obtaining lauraldehyde are velocity of the gas mixt. 100 cu. m./hr. and temp. 355-60°. The yield of lauraldehyde was 30-2%. It had <math>d_4^{20}</math> 0.84, <math>n_D^{20}</math> 1.435-1.438.</p> <p>W. R. Henn</p>			
A.S. S. A. METALLURGICAL LITERATURE CLASSIFICATION			
FROM STRICTION		FROM STRICTION	
GROUPS		GROUPS	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	

COMMON ELEMENTS										PROCESSES AND PROPERTIES INDEX										COMMON ELEMENTS									
MATERIALS INDEX										COMMON ELEMENTS										COMMON ELEMENTS									
<p>9 Production of hydroxycitronellal. S. S. Namethin and O. M. Kholmer. <i>Sintezy Dushistyykh Veshchestv, Shornik</i> <del>1940: 207-211</del>; <i>Khim. Referat. Zhur.</i> 1940, No. 4, 119-20. Hydroxycitronellal was prepd. from citronellal obtained from citronella oil. The bisulfite compd. citronellal was hydrolyzed by the action of HCl and the hydroxycitronellal was obtained from the bisulfite compd. by the action of NaOH soln. By using the dry bisulfite compd. 30% of hydroxycitronellal, suitable for <i>perfumery purposes</i>, was obtained with 37-40% NaOH soln. The duration of the process was 80 hrs. W. R. Henn /</p>																													
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																													
COMMON ELEMENTS										COMMON ELEMENTS										COMMON ELEMENTS									
COMMON ELEMENTS										COMMON ELEMENTS										COMMON ELEMENTS									



1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
- PROCESSES AND PROPERTIES INDEX																			
<p>02</p> <p>Accession: O. M. Khel'mer and Zaved Skoshnyk's            Material: 00,000-000: 51, 1041. Isomafrole is prepd.            by heating mafrole with alc. KOH, and distn. of the alc. from            Isomafrole mass.</p>										<p>10</p>									
<p>ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
<p>100000 00</p>										<p>100000 00</p>									
<p>100000 00</p>										<p>100000 00</p>									



1. KHOLMER, O. M.
2. USSR (600)
4. Geraniol
7. Producing geraniol from ether oils, Masl. zhir. prom, 17, no. 3, 1952.
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

*Khaf'mer, O.M.*

*7*  
/Production of glutaric propionic acid ester. I. M. Le-  
bedev, V. D. Gorchakov, O. M. Khaf'mer, and S. G. Poly-  
akova. U.S.S.R. 103,727, Aug. 25, 1975. Glutaric and  
propionic acid are heated in the presence of acid catalysts.  
The reaction is carried out in a solvent, such as D.M.F. or  
other aromatic hydrocarbon. *M. Hosh*

*4*

KHOLMER, O.M.

✓ Control of citral manufacture by use of potentiometer.  
K. I. Bogacheva, O. M. Kholmer, and E. S. Zhuravleva.  
*Moskovskoe Zhurnal Prirod. Nauch. 22*, No. 8, 223 (1956). The  
optimum pH range for citral-sulfite coupling and separation are  
8.15-8.5 and 11.0, resp. The yield of citral was 90% of  
theoretical.

Vladimir N. Kravinsky

3

KHOL'MER, O.M., inzh.; POLYAKOVA, S.G., inzh; LASKINA, Ye.D., kand.khim.nauk

Production of the synthetic isoeugenol from guaiacol. Masl.-zhir.:  
prom. 24 no.9:31-33 '58. (MIRA 11:10)

1. Moskovskiy zavod "Slozhnyye ofiry" (for Khol'mer, Polyakova).
2. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh i  
natural'nykh dushistykh veshchestv (for Laskina).  
(Isoeugenol) (Guaiacol)

*KHOL'MER, O.M.*

KRASEVA, V.N., inzh.; BAG, A.A., kand. tekhn. nauk; MALKINA, L.L.;

KHOL'MER, O.M., inzh.

Catalytic dehydrogenation of alcohols. Masl.-zhir. prom. 24  
no.12:23-25 '58. (MIRA 11:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh  
i natural'nykh dushistykh veshchestv (for Kraseva, Bag). 2. Moskovskiy  
zavod "Slozhnyye efiry" (for Malkina, Khol'mer).  
(Perfumes, Synthetic) (Alcohols) (Dehydrogenation)

KHOL'MER, O.M., inzh.; POLYAKOVA, S.G., inzh.

Industrial method for manufacturing synthetic isoeugenol.  
Mosl.-zhir.prom. 25 no.4:26 '59. (MIRA 12:6)

1. Zavod "Sloshnyye efiry."  
(Isoeugenol)



POLYAKOVA, S.G., insh.; KHOL'MER, O.M., insh.; LEBNDEV, I.M., insh.

Production of guaiacolpropionic ester. Masl.-zhir.prom. 25  
no.8:23-24 '59. (MIRA 12:12)

1. Moskovskiy zavod "Sloshnyye efiry."  
(Guaiacol) (Propionic acid)

FREDLIN, L.Kh., doktor khim.nauk; SHARF, V.Z., inzh.; KHOL'MER, O.M., inzh.;  
MALKINA, L.L.; LEBEDEV, I.M., inzh.

Preparation of guaiacol by the catalytic dehydration of a mixture  
of pyrocatechol and methanol. Masl.-zhir.prom. 26 no.10:24-27 0  
'60. (MIRA 13:10)

1. Institut organicheskoy khimii AN SSSR imeni N.D.Zelinskogo (for  
Freydlin, Sharf). 2. Moskovskiy zavod "Slozhnyye efiry" (for  
Khol'mer, Malkina, Lebedev).  
(Guaiacol) (Pyrocatechol) (Methanol)

FREYDLIN, L. Kh.; SHARF, V.Z.; KHOL'MER, O.M.; MALKINA, L.L.

Properties of a boron phosphate catalyst in the dehydration  
of a pyrocatechol-methanol mixture. Kin. i kat. 2 no.2:228-234  
Mr-Ap '61. (MIRA 14:6)

1. Institut organicheskoy khimii imeni N. D. Zelinskogo AN SSR  
i Issledovatel'skaya laboratoriya zavoda "Slozhnyye efiry".  
(Boron phosphate)  
(Dehydration (Chemistry))

FREYDLIN, L.Kh.; doktor khim.nauk; SHARF, V.S., inzh.: KHOLOMER, O.M.,  
inzh.; MALKINA, I.L.; LEBEDEV, I.M., inzh.

Preparation of gustole (o-ethoxyphenol) by the dehydration of a  
mixture of pyrocatechol and ethanol on a baron phosphate  
catalyst. Masl.-zhir. prom. 27 no. 2:29-30 '61. (REV. 14:2)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR  
(for Freydlin, Sharf). 2. Moskovskiy zavod "Slozhnyye afiry"  
(for Kholmer, Malkina, Lebedev).  
(Pyrocatechol) (Ethyl alcohol) (Phenol)

*KHOLMER, O.M.*

33441

8/064/62/000/001/004/008

B110/B138

53400

AUTHORS: Pioshin, M. Ya., Lebedev, I. M., Kazakova, L. I.,  
Gankin, S. Z., Khol'mer, O. M., Gurevich, G. I.,  
Heyman, Ye. Ya.

TITLE: Electrosynthesis of  $\omega$ -oxypentadecanoic acid

PERIODICAL: Khimicheskaya promyshlennost', no. 1, 1962, 41 - 43

TEXT:  $\omega$ -oxypentadecanoic acid (I) is produced by "mutual" anodic condensation of  $\omega$ -acetoxyundecanoic acid (II) and adipic acid monoethyl ester (III), during the electrolysis of an aqueous solution of a mixture of

their salts:  $\text{CH}_3\text{COO}(\text{CH}_2)_{10}\text{COO}^- + ^-\text{OOC}(\text{CH}_2)_4\text{COOC}_2\text{H}_5$

$\rightarrow \text{CH}_3\text{COO}(\text{CH}_2)_{14}\text{COOC}_2\text{H}_5 + 2\text{CO}_2$  and then saponification of ethyl ester.

The authors wished to obtain better yields by substituting the aqueous by an alcoholic medium, and the Pt anode by  $\text{PbO}_2$ , magnetite, and graphite anodes. A cylindrical glass electrolyser with cylindrical, Pt anode, perforated Ni cathode and graphite rod anode concentrically arranged, was

Card 1/3

.33441

S/064/62/000/001/004/008  
B110/B138

Electrosynthesis of...

filled with an alcoholic solution of II, III, potash, and soda. Current intensity, voltage, and temperature were measured, and the electrolysis was concluded when 0.7 - 1.0 ml of 0.1 N KOH solution (phenol phthalein) was used per ml of electrolyte. After distilling  $C_2H_5OH$  at 20 mm Hg, the following quantities were fractionated at 2 - 5 mm Hg: (a) 30% at 160°C, (b) 25% at 183°C, and (c) 30% at 183 - 200°C. The (c) substance was the ester of I. ~10% ester was separated from (a) and (b). It was saponified for 2 hrs with a 50% KOH solution in the presence of ethanol, then acidified with HCl, and I was extracted with toluene. With 125 ml  $C_2H_5OH$ , 21 g II, 45 g III, and 5 g  $K_2CO_3$ , the I yield was 45 - 48% at 10 a/dm<sup>2</sup>. As 3.42 times the theoretical amount of current is required with an aqueous solution, the yield, 27% must be appropriately divided: 27/3.42 ≈ 8%. As Pt consumption is 150 g ton the possibility of using  $PbO_2$ , magnetite, or graphite was studied. The dependence of yield on electrolysis conditions was studied with nonporous graphite in ethyl and propyl alcohol with 112 g of II, 238 g of III, and 24 g of  $K_2CO_3$  at 60 - 65°C. Yield of I, 48 - 50%, was not dependent on the current

Card 2/3

33441

S/064/62/000/001/004/008  
B110/B138

Electrosynthesis of...

intensity in a wide range. Maximum yields were obtained with a II : III ratio of 2 : 1 and 1 : 3 at 12 a/dm<sup>2</sup>, 60 - 65°C and a K<sub>2</sub>CO<sub>3</sub> concentration of 20 g/liter. Voltage increases rapidly with anode density and decreases with K<sub>2</sub>CO<sub>3</sub> concentration. The optimum is 40 - 50 v. With 7 g/liter H<sub>2</sub>O, a ratio of II : III = 1 : 3, and at 14 a/dm<sup>2</sup> and 60 - 65°C, the yield is 49.2% decreasing to 35%, with 100 g/liter of H<sub>2</sub>O. Optimum yields (49.2% current efficiency) are obtained with ethanol or propanol solutions of 112 g/liter II, 238.6 g/liter III, 24 g/liter K<sub>2</sub>CO<sub>3</sub>, 7 g/liter H<sub>2</sub>O and anode density of 14 a/dm<sup>2</sup> at 60 - 65°C. If the old solution was replaced when acidity reached 1.2 - 1.4 ml of 0.1 N KOH/ml, yield was 44 - 45% (41.5% current efficiency) at 15 a/dm<sup>2</sup> and 65 - 70°C. Yield was almost doubled by using an alcoholic electrolyte (six times the current efficiency). Part II which is bound as a salt and does not react, can be recycled. The higher energy consumption (voltage increase 3 - 4 times) is compensated by increased current efficiency. There are 4 figures, 1 table, and 3 Soviet references.

Card 3/3

SHAFR, V.Z., kand.khimicheskikh nauk; FREYDLIN, L.Kh., doktor khimicheskikh nauk; KHOL'MER, O.M., inzh.; LEBEDEV, I.M., inzh.; Prinimala uchastiyer GORSKAYA, L.A.

Obtaining ethyl ethers of pyrocatechin and resorcin from their phenolates and ethyl chloride. Masl.-zhir.prom. 28 no.4: 35-37 Ap '62. (MIRA 15:5)

1. Institut organicheskoy khimii AN SSSR imeni Zelinskogo (for Sharf, Freydlin). 2. Moskovskiy zavod "Slozhnyye efiry" (for Khol'mer, Lebedev).

(Ethers)



BORUNOVA, M.V.; FREYDLIN, L.Kh.; KHOLMER, C.M.; NOVIKOVA, Ye.S.

Preparation of propionaldehyde by catalytic dehydrogenation  
of n-propyl alcohol. Izv. AN SSSR.Ser.khim. no.10:1845-1849  
'65.

(MIRA 18:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR i  
Moskovskiy zavod "Slozhnyye efiry".

ACCESSION NR: AP4018368

S/0120/64/000/001/0076/0081

AUTHOR: Boos, E. G.; Pavlova, N. P.; Volkova, O. I.; Gunenkova, O. V.;  
Zaytsev, K. G.; Kholmetskaya, A. V.

TITLE: Methods of measuring ionization losses of relativistic particles in a nuclear emulsion

SOURCE: Pribery\* i tekhnika eksperimenta, no. 1, 1964, 76-81

TOPIC TAGS: ionization loss, relativistic particle, relativistic particle  
ionization loss, nuclear emulsion, Ilford G-5 emulsion, emulsion development,  
emulsion development irregularity

ABSTRACT: Irregularities of development of Ilford G-5 nuclear emulsion were studied; methods of eliminating them are suggested. A stack of 40 G-5 films, 600-micron thick, 12x20 cm was irradiated (in CERN) by a 91.8-Gev/s-mean-impulse proton beam. To find the irregularity of development of the emulsion films, the density of blobs on the relativistic-particle tracks was investigated both in the plane parallel to the emulsion and in depth. The effects of the micro-

Card 1/2

BOOS, E.G.; PAVLOVA, N.P.; VOLKOVA, O.I.; GUNENKOVA, O.V.; ZAYTSEV, K.G.;  
KHOLMETSKAYA, A.V.

Methodology of measuring ionization losses by relativistic  
particles in a nuclear emulsion. Prib. i tekhn. eksp. 9 no.1:  
76-81 Ja-F '64. (MIRA 17:4)

1. Institut yadernoy fiziki AN KazSSR.

DEM'YANETS, L.A., inzh.; KHOIMETSKIY, I.L., inzh.; STOROZHNIK, D.A., inzh.

Operating a mobile rotary car dumper. Mekh. i avtom. proizv. 18  
no.9:33-35 S '64. (MIRA 17:11)

1. KHOLMIN, A. I.
2. USSR (600)
4. Fergana Valley-Geology
7. Report on the electric geophysical exploration activities in the Kirghis S. S. R. during 1943-1944 at the Ak-Mechet' formation. Izv. Glav. upr. geol. fon. no. 3 1947
9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

KHOLMKVIST, A.A.

[Storing potatoes and vegetables] Khranenie kartofelia i  
ovoshchei. 2., perer. i dop. izd. Moskva, Gos. izd-vo selkhoz  
lit-ry, 1958. 188 p. (MIRA 12:1)  
(Potatoes--Storage) (Vegetables--Storage)

KHOLMKVIST, A.A.

Recollections about Professor Artur Arturovich Iachevskii,  
corresponding member of the Academy of Sciences of the  
U.S.S.R. Trudy VIZR no.23:53-55 '64. (MIRA 19:2)

L 27351-66 EWT(m)/T/ETC(m)-6 WW/DJ

ACC NR: AP6007712

SOURCE CODE: UR/0413/66/000/003/0105/0106

AUTHORS: Kholmkyist, V. A.; Slepov, L. M.; Baranov, Yu. N.; Pekov, A. V.; Tomilin, V. S.

ORG: none

TITLE: Ball bearing. <sup>γ</sup> Class 47, No. 178618

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1966, 105-106

TOPIC TAGS: ball bearing, antifriction bearing

ABSTRACT: This Author Certificate presents a ball bearing for axial motion, consisting of a body with a closed channel which is filled with balls. To increase accuracy and reliability of the connection, the bearing body is constructed of several sections connected by a fixture. The sections fit into openings in the latter and interact with its bearing surfaces through inserts (see Fig. 1). To prevent the balls from falling out when the shaft is removed, an additional feature provides each section with two limiting plates which have inclined edges directed toward the balls.

UDC: 621.822.76  
62-229.314

Card 1/2



I. 27351-66

ACC NR: AP6007712

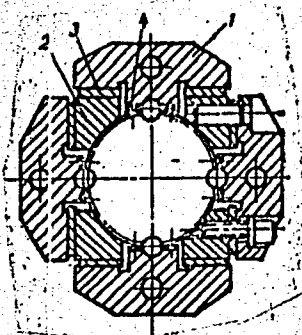


Fig. 1. 1 - section; 2 - fixture;  
3 - inserts; 4 - limiting plates.

Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 14Sep64

Card 2/2

PB

SHENDRIK, N.[Sendriks, N.]; KHOLMOGOROV, A.

Let us realize in life the decisions of the July Plenum of the  
Central Committee of the Communist Party of the Soviet Union and  
the 3d Plenum of the Central Committee of the Latvian Communist Party.  
Vestis Latv ak no.10:5-18 '60. (EEAI 10:9:10

(Russia—Communist Party)  
(Latvia—Communist Party)

KHOLMOGOROV, D.

In permafrost regions. Sel'. stroi. 15 no.11:8-9 N '60.

(MIRA 13:11)

1. Nachal'nik stroitel'no-montazhnogo upravleniya No.2 tresta "Yakut-stroy."

(Yakutia--Foundations)

(Frozen ground)

KHOLMOGOROV, G.

"Combatting Flakes by Means of Heat Treatment," Stal', 10, No.9, pp. 31-32,  
1940

Evaluation B-58884

KHOLMOGOROV, G. M., Chief Engr. of the Central Sci Res Laboratory of Textile-  
Haberdashery In-ry Cand. Tech. Sci.

Dissertation: "Influence of Certain Setting Parameters on the Physicomechanical  
Properties of Parachute Tapes." Moscow Textile Inst, 27 Mar 47.

SO: Vechernyaya Moskva, Mar, 1947 (Project #17836)

KHOLMOGOROV, G. M.

19051

USSR/Textile and Clothing Industry      Dec 1947  
4415.0100

"Urgent Problems of the Textile and Haberdashery Industry," G. M. Kholmogorov, Laureate of Stalin Prize, 3 pp

"Leg Prom" Vol VII, No 12

Mentions following factories: imeni Samoylova in Leningrad, Leningrad Lace, No 4, 8, 11, 14, 2, 6 (Chief Engineer: Ignat'yev), 1, and 3. Cites some reasons for slow rate of production. Five major technological experiments suggested for future to increase production. Lists various types of products manufactured by the industry.

ID

19051

KHOLMOGOROV, G. (1). kandidat tekhnicheskikh nauk.

"Making lace on a multishuttle lacemaking machine." A.A. Shchekin.  
Reviewed by G. Kholmogorov. Leg.prom. 15 no.12:51 D '55.

(MLRA 9:5)

(Lace and lacemaking)

KHOLMOGOROV, G.M.

Speed up the application of scientific achievements in the  
textile and dry goods industry. Tekst.prom. 21 no.12:55-  
57 D '61. (MIRA 15:2)

1. Glavnyy inzh. Tsentral'noy nauchno-issledovatel'skoy laboratorii  
tekstil'no-galantereynoy promyshlennosti Mosgorsovnarkhoma.  
(Textile industry)



KHOLMOGOROV, G.M., kand.tekhn.nauk

All dry good indices should be excellent. Tekst.prom. 22 no.9f  
73-76 S '62. (MIRA 15:9)

1. Glavnyy inzhener Tsentral'noy nauchno-issledovatel'skoy  
laboratorii tekstil'no-galantereynoy promyshlennosti.  
(Dry goods)

KHOLMOGOROV, G.M.

Products of the textile and dry goods industry at the Exhibition of Achievements of the National Economy. Tekst. prom. 23  
no.6:54-56 Je '63. (MIRA 16:7)

1. Glavnyy inzh. Tsentral'noy nauchno-issledovatel'skoy  
laboratorii tekstil'no-galantereynoy promyshlennosti.  
(Textile industry—Exhibitions)

KHOLMOGOROV, M. I.

USSR/ Electricity - Boilers, High-Pressure Power Stations

Jul 50

"Some Details Regarding the Installation of the PK-10 Boiler in Prefabricated Sections,"  
I. G. Naymark, M. I. Kholmogorov, Engineers.

"Elek Stants" No 7, pp 23-29

Describes how new high-pressure PK-10 boiler manufactured at Podol'sk plant was installed in electric power station in 1949. Includes dimensions and constructional details of boiler and table giving its subdivision into prefabricated sections. Concludes boiler is unsuitable for installation by sections. Gives summary of advantages and disadvantages of various types of cranes and derricks for this type of work.

PA 162T23

KHOLMOGOROV, M. I.

185T24

USSR/Engineering - Welding, Methods Feb 51

"Welding Operations in Assembling High-Pressure Boilers (110 Atm, 510°C)," M. I. Kholmogorov, Engr

"Avtozen Delo" No 2, pp 24-27

Describes procedure for joining tubes of cyl boilers installed at elec power sta. Elec arc method showed better results than gas welding in respect to mech properties and structure of metal in joint. Major difficulties in using method consist of obtaining high-quality elec-trodes of small diam, 2, 2.5 and 3 mm, feasible

185T24

USSR/Engineering - Welding, Methods Feb 51  
(Contd)

for welding alloy steels. Outlines heat treatment of welded joints.

185T24

KHOLMOGOROV, M. V.

USSR/Metals - Finishing, Equipment

Aug 51

"Shot Blasting Machines," A. M. Vetvitskiy, M. V. Kholmogorov, Engineers, Moscow  
Automobile Plant imeni I. V. Stalin

"Litey Proiz" No 8, pp 11-12

Describes construction, materials and operation of shot blasting head with following design data: diam of turbine rotor 500 mm, effective width of blades 64 mm, speed 2,250 rpm, productive capacity 140 kg of shot per min. Discusses 6 variations of head.

PA 197T71

KHOLMOGOROV, M.V.

New tenon-cutting machine. Mashinostroitel' no.12:18  
D '59. (MIRA 13:3)  
(Woodworking machinery)

KHOLMOGOROV, M. V.

Grinding surfaces of large parts. Mashinostroitel' no.9:-29 S '60.  
(MIRA 13:9)

(Grinding and polishing)

S/182/63/000/001/007/012  
A004/A126

AUTHOR:: Kholmogorov, M. V.

TITLE: Important advantage of presses with underneath drive

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 1, 1963, 26 - 28

TEXT: The analysis carried out by the author shows that the formulae for the calculation of the crankshaft and eccentric-shaft torques of presses with underneath drive differ from the formulae for presses with overhead drive. He derives formulae for the torque of the ideal machine and the torque of the real machine (taking into account the friction). Based on the formulae presented, a graph is plotted for a press with the following data: crank radius  $R = 300$  mm, length of connecting rod  $L = 1,200$  mm, ratio of crank radius to length of connecting rod  $k = 0.25$ , radius of supporting journals of the eccentric shaft  $r_o = 150$  mm,  $r_A = 460$  mm and  $r_B = 90$  mm; coefficient of friction  $f = 0.06$ . It can be seen from the torque change vs crank angle characteristic that for presses with underneath drive, the torque in the range of a crank angle of  $90^\circ$  has lower value, while in the working zone ( $\alpha = 30^\circ$ ) it is lower by a factor of 1.5. There are 3 figures.

Care 1/1



KHOLMOGOROV, M.V.

Important advantages of presses with lower drives. Kuz.-shtan, proizv.  
5 no.1:26-28 Ja '68. (MIRA 16:2)  
(Power presses--Transmission devices)

S/271/63/000/001/044/047  
D413/D308

AUTHORS: Keropyan, K.K. and Kholmogorov, N.N.

TITLE: On the solution of building mechanics problems by means of T and P equivalent circuits

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya tekhnika, no. 1, 1963, 53, abstract 1B299 (Tr. Rostovsk. inzh.-stroit. in-ta, no. 23, 1961, 87-101)

TEXT: The authors observe that the new ЭМСС -7 (EMSS-7) simulator, built at the computer center of the AS UkrSSR, has recently been applied to the calculation of jointed-rod systems in building practice. An asymmetric П-type (P-type) circuit analog for a bending bar is taken as the basis of the simulator. Investigations have shown that there is a class of problems in building mechanics that cannot be solved by means of the asymmetric P-type analog circuit because it differs from the mechanical system. An expanded range of problems soluble on the EMSS-1, 5, 6 and 7 simul-

Card 1/2

On the solution ...

S/271/63/000/001/044/047  
D413/D308

ators are assessed. To establish the connexion between the T- and P-type analog circuits, two circuits are considered which simulate a bending bar; Kirchhoff's equations are used to derive the transformation formulas from the parameters of the T circuit to those of the P circuit and vice versa. It is pointed out that the T circuit solves the complete system of canonical equations which embrace almost all problems in building mechanics. The EMSS-5 and 6 simulators are stated to have broader potentialities than the EMSS-7. A detailed analysis is made of the case of constrained torsion of caissons, and the results are given of an experiment carried out using the EMSS-5 and 7 simulators. These check problems have been solved: (1) three-span parabolic arch in flexure; (2) three-span solid beam in constrained torsion; (3) thin-walled three-section casing in constrained torsion. In the analysis of the results attention is drawn to the wider range of the T-type equivalent circuit and the awkwardness of working with the EMSS-7 simulator because of the alternating scale-factor. When the simulators are compared, preference goes to the EMSS-5 and 6 (provided they are further developed). 7 figures. 17 references.

[Abstracter's note: Complete translation]

Card 2/2

KHOLMOGOROV, S.M.; KERSHENBAUM, V.Ya.

Certain structural changes in the design of pipelines brought about by the use of glass-reinforced plastic pipes. Transp. i khran. nefti i nefteprod. no.5:3-5 '65. (MIRA 18:10)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy i gazovoy promyshlennost' imeni akad. Gubkina.

KHOLMOGOROV, V.N.; DEMESHIN, P.N.

Device for upholstering stuffed furniture. Der.prom. 4 no.4:  
27 Ap '55. (MLRA 8:6)  
(Upholstery)

KHOLMOGOROV, Y.M.; FIL'KIN, A.I.

New design of panel construction furniture. Der.prom. 5 no.3:  
3-5 Mr '56. (MIRA 9:7)

1. TsPKB Glavmebel'prom.  
(Furniture industry)

*KHOLMOGOROV, V. V.*

USSR/Miscellaneous - Machine tools

Card 1/1 : Pub. 12 - 11/14

Authors : Vetvitskiy, A. M.; Tokar', M. Kh.; and Kholmogorov, V. V.

Title : Modernization of the gear-cutting machine

Periodical : Avt. trakt. prom. 3, 31-32, March 1954

Abstract : The modernization of the gear-cutting machine Komsomolets E-3-1, is described. The modernization was carried out for the purpose of increasing the accuracy and graduation reliability of the machine. Drawings.

Institution : The Stalin Automobile Plant, Moscow

Submitted : ...

KHOLMOGOROV, V.Ye.; TERESHIL, A.N., akademik

Light-induced electron paramagnetic resonance signal in crystalline  
chlorophyll observable in the presence of water vapor. Dokl. AN  
SSSR 137 no. 1:199-202 Mar-Apr '61. (MIRA 14:2)  
(Chlorophyll--Spectra) (Electrons)



KHOLMOGOROV, V.Ye.; AKIMOV, I.A.

Nature of a photoinduced electron paramagnetic resonance signal  
in silver bromide sensitized by cyanine dyes. Dokl.AN SSSR 144  
no.2:402-405 My '62. (MIRA 15:5)

1. Predstavleno akademikom A.N.Tereninym.  
(Silver bromide--Spectra) (Cyanine dyes)

S/020/62/146/001/014/016  
B101/B144

AUTHORS: Baranov, E. V., Kholmogorov, V. Ye., Terenin, A. N.,  
Academician

TITLE: Photoinduced epr signals in zinc oxide

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 1, 1962, 125 - 128

TEXT: ZnO samples were exposed to ultraviolet or visible light in vacuo or in air at room temperature or at 77°K and the epr signals were measured. Results: (1) ZnO not annealed and ZnO annealed in air at 500°C showed no epr signals at 20°C either in the dark or when exposed to light. (2) Irradiation at 77°K produced a line with  $g = 1.964$  (line I),  $\Delta H = 4.5$  oersteds, and a line with  $g = 2.018$  (line II),  $\Delta H = 3.0$  oersteds, both in air and in vacuo. Both lines are preserved at 77°K in the dark, but disappear at 20°C in the sample illuminated in air. (3) In vacuo, line II disappears and line I becomes weaker. The effect is repeatable. (4) At 77°K, the epr signals occur not only on irradiation with  $\lambda = 365 \text{ m}\mu$ , but also on irradiation with visible light; their intensity, however, decreases if the wavelength increases. (5) ZnO which had been in a

Card 1/2

Photoinduced epr signals...

S/020/62/146/001/014/016  
B101/B144

$10^{-4}$  mm Hg vacuum at  $20^{\circ}\text{C}$  for 2 hrs gave no signal in the dark but an intensive line I with  $\Delta H = 7.5$  oersteds on illumination; the conductivity of the sample increased. (6) ZnO annealed at  $450^{\circ}\text{C}$  in vacuo and not illuminated gave an intensive line I,  $\Delta H = 7.5$  oersteds, the conductivity increasing strongly. Oxygen supplied at  $10^{-3}$  mm Hg reduced the signal intensity. (7) Contact of  $\text{O}_2$  with ZnO heated to  $100-250^{\circ}\text{C}$  produced an intensive signal with  $g = 2.004$  (line III). Adsorption of  $\text{O}_2$  at  $20^{\circ}\text{C}$  gave an asymmetric signal with  $g_{\perp} = 2.003$ ,  $g_{\parallel} = 2.008$ . An increase of  $p_{\text{O}_2}$  from  $10^{-3}$  to 100 mm Hg made line I disappear. Conclusions: Line I corresponds to photodesorption of  $\text{O}_2$  from the ZnO surface. Line III corresponds to chemisorption of atomic oxygen having an unpaired electron. The cause of line II remains unexplained. Preliminary experiments have shown that epr signals are also produced on addition of organic dyes whose spectral absorption range is different from that of ZnO. There are 2 figures and 1 table.

SUBMITTED: April 20, 1962

Card 2/2

BARANOV, E.V.; KHOIMOGOROV, V.Ye.; TERENIN, A.N., akademik

Light-induced electron paramagnetic resonance signals in zinc.  
Dokl. AN SSSR 146 no.1:125-128 S '62. (MIRA 15:9)  
(Zinc<sub>2</sub>oxide—Spectra) (Photochemistry)

KHOLMOGOROV, V.Ye.; TERENIN, A.N., akademik

Light-induced signals of electron paramagnetic resonance in organic  
dye crystals. Dokl. AN SSSR 146 no.3:652-655 S '62. (MIRA 15:80)  
(Dyes and dyeing—Spectra) (Photoelectricity)

KHOLMOGOROV, V. Ye.; SIDOROV, A. N.; TEREVIN, A. N., akademik

Light-induced electron paramagnetic resonance signals in  
chlorophyll in the crystalline state and its infrared spectra.  
Dokl. AN SSSR 147 no.4:954-957 D '62.

(MIRA 16:1)

(Chlorophyll—Spectra)  
(Paramagnetic resonance and relaxation)

BARACHEVSKIY, V.A.; KHOLMOGOROV, V.Ye.; KOTOV, Ye.I.; TERENIN, A.N.,  
akademik

Absorption spectra and electron paramagnetic resonance spectra  
of positive acene ions formed in vacuum adsorption. Dokl. AN  
SSSR 147 no.5:1108-1111 D '62. (MIRA 16:2)

1. Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo  
universiteta im. A.A. Zhdanova.  
(Acenes—Spectra) (Adsorption)

S/051/62/012/006/006/020  
E075/E436

AUTHORS: Kholmogorov, V.Ye., Glebovskiy, D.N.

TITLE: On the electron paramagnetic resonance spectra of organic dyestuffs

PERIODICAL: Optika i spektroskopiya, v.12, no.6, 1962, 728-732

TEXT: Phthalocyanine, triarylmethane, azo and cyanine dyes were examined by electron paramagnetic resonance (EPR) in connection with the study of semiconductor and photoelectric properties of dyestuffs. The EPR spectrograph worked on the frequency of 9600 Mc/s and was fitted with a cylindrical resonator H<sub>01</sub> and wire bolometer as a detecting element. All the measurements were carried out in air at 20°C, and under vacuum (10<sup>-4</sup> Hg) at 20°C and 75 to 100°C. The measurements on metal free phthalocyanide and phthalocyanide of Fe<sup>3+</sup>, Co<sup>2+</sup>, Cu<sup>2+</sup>, Ni<sup>2+</sup>, 2Na<sup>+</sup>, 2K<sup>+</sup>, Ag<sup>2+</sup>, Be<sup>2+</sup>, Mg<sup>2+</sup>, Zn<sup>2+</sup>, Cd<sup>2+</sup>, Al<sup>3+</sup>, Sn<sup>2+</sup>, Pt<sup>2+</sup>, Ce<sup>3+</sup>. The phthalocyanides with a paramagnetic metal in the centre of the molecule gave wide EPR lines. Narrow EPR lines ( $\Delta H = .4$  to 10 gs,  $g = 2.003$ ) were found in the phthalocyanides of diamagnetic metals. The narrow lines were due to impurities containing

Card 1/2



On the electron paramagnetic ...

S/051/62/012/006/006/020  
E075/E436

unpaired electrons. Examination of crystal violet (Applied Chemical and Dye Corp), acid blue O (Agfa), basic brilliant green (Agfa), malachite green (Agfa), fuchsine (Hoechst), aurine (Agfa), auramine (Hoechst), rodamine B and G (Agfa) did not reveal any narrow lines. Phenosafranine did not give the narrow line characteristic of delocalized unpaired  $\pi$ -electrons. Such a line was found for nigrosine but its intensity varied for different samples and was probably due to impurities. Unstable cyanine dyes gave narrow EPR lines, which were due to decomposition products with unpaired electrons. Stable cyanine dyes did not give the narrow lines. There are 2 tables.

SUBMITTED: May 8, 1961

Card 2/2

S/020/63/149/001/021/023  
B101/B144

AUTHORS: Kholtmogorov, V. Ye., Baranov, E. V., Terenin, A. N.,  
Academician

TITLE: Study of the sensibilization of photo-dehydrogenation of  
alcohols at 77°C using the epr method

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 1, 1963, 142-145

TEXT: On taking the epr spectrum of the photo reaction that attends the stripping of one electron from aromatic amines at 77°K in alcohol-ether solution, (this reaction occurring under the effect of  $\lambda\lambda < 313 \text{ m}\mu$ ) and intensive formation of alcohol radicals was observed at UV wavelengths  $\lambda\lambda \geq 334 \text{ m}\mu$ . This effect was studied in  $10^{-3} - 10^{-1}$  mole/l solutions of aniline, diphenyl amine, triphenyl amine, carbazole, fluorene and naphthalene in methanol, ethanol, i-propanol, n-butanol, and i-butanol at 77 and 90°K. Results: When the solvents alone were irradiated with UV light at 77 or 90°K, merely small amounts of radicals characteristic of the respective alcohol formed. In the presence of aromatic amines and of carbazole  $10^{-4} - 10^{-3}$  mole/l radicals formed within a few seconds. The epr Card 1/2

Study of the sensibilization of ...

S/020/63/149/001/021/023  
B101/B144

spectra showed that the radicals are formed by the knocking-out of one H atom in  $\alpha$  position. The radicals are unstable and their spectrum changed in the dark when the temperature was increased. When the solution was not degassed, peroxide radicals formed at 90°K. Presumably photo-dehydrogenation of alcohols is caused by excitation of the singlet level of the amines and the carbazole, which turns into the phosphorescent triplet state. This could be proved by selective desactivation of the triplet state by naphthalene. Naphthalene solution in itself did not phosphoresce at 77°K. In the presence of triphenyl amine or carbazole, intensive phosphorescence sets in and alcohol radicals form, but only 20 % of the quantity observed in the absence of naphthalene. There are 5 figures and 2 tables.

SUBMITTED: December 11, 1962

Card 2/2

BARACHEVSKIY, V.A.; Kholmogorov, V.Ye.; Terenin, A.N., akademik

Concentration effect in the absorption spectra and electron  
paramagnetic resonance of adsorbed molecular ions of anthracene.  
Dokl. AN SSSR 152 no.5:1143-1146 0 '63. (MIRA 16:12)

1. Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo  
gosudarstvennogo universiteta im. A.A.Zhdanova.

KHOLMOGOROV, V.Ye., BARANOV, E.V.; TERENIN, A.N., akademik

Role of the triplet state of aromatic amines in the photochemical  
reaction of dehydrogenation of alcohols at 77°K. Dokl. AN SSSR  
152 no.6:1399-1402 0 '63. (MIRA 16:11)

S/051/63/014/002/021/026  
E039/E120

AUTHOR: Kholmogorov, V.Ye.

TITLE: Electron paramagnetic resonance signals in  
phthalocyanine dyes in the crystalline state

PERIODICAL: Optika i spektroskopiya, v.14, no.2, 1963, 303-304

TEXT: This is a continuation of previous work  
(V.Ye.Kholmogorov and D.N. Glebovskiy, Opt. i spektr. v.12, 1962,  
728). Phthalocyanine without a metal and phthalocyanine-Mg were  
purified by multiple filtering of a concentrated solution in  
pyridine and dioxane with subsequent precipitation of the dye by  
the addition of distilled water. Intense electron paramagnetic  
resonance (EPR) lines were observed using this precipitate.  
When the pure phthalocyanine is obtained as a suspension in  
vaseline either a very weak or zero EPR signal is obtained.  
Phthalocyanine without metal crystallized in the  $\beta$  modification  
does not produce a narrow EPR signal. No significant change in  
paramagnetism is observed with the transition from  $\alpha \rightarrow \beta$   
modification for the case of phthalocyanine-Mg. This transition  
is complete in the case of phthalocyanine without metal after  
Card 1/2

Electron paramagnetic resonance ...

S/051/63/014/002/021/026  
E039/E120

baking for 6 hours at 300 °C in a vacuum while the phthalocyanine-Mg requires 6 hours at 350 °C. The transition is monitored by observing the IR absorption spectrum. The EPR line observed in a sample of vacuum sublimed phthalocyanine appears to be due to the presence of a paramagnetic impurity or to the appearance of uncoupled electrons in the dye crystal.

SUBMITTED: July 20, 1962

Card 2/2

ACCESSION NR: AP4044387

S/0195/64/005/004/0630/0636

AUTHOR: Karakchlyev, L. G.; Barachevskiy, V. A.; Kholmogorov, V. Ye.

TITLE: Spectroscopic investigation of the acidity of some silicate catalysts

SOURCE: Kinetika i kataliz, v. 5, no. 4, 1964, 630-636

TOPIC TAGS: silicate, catalyst, aluminum oxide, magnesium oxide, silicon dioxide, titanium dioxide, anthracene, spectroscopy, catalyst acidity, aluminum silicate, magnesium silicate, titanium silicate, electron paramagnetic resonance, zircon

ABSTRACT: The acidity of catalysts of the type  $Al_2O_3+SiO_2$ ,  $MgO+SiO_2$  and  $TiO_2+SiO_2$  was investigated by absorption spectra and the electron paramagnetic resonance of adsorbed molecular ions of anthracene. The most intensive absorption bands and EPR signals, and hence the highest number of acid centers, were found in the systems  $Al_2O_3+SiO_2$  and  $ZrO_2+SiO_2$ . The absorption curves for anthracene adsorbed on the initial oxides and on  $Al_2O_3+SiO_2$  catalysts are plotted for comparison. The absorption band of the cation radical was at 700 mμ for anthracene molecules adsorbed on the surface of  $\gamma-Al_2O_3$ . It was found that  $MgO+SiO_2$ ,  $ZrO_2+SiO_2$  and  $Al_2O_3+SiO_2$  have both proton and aprotic acidities. In the adsorbents investigated,  $Al^{+3}$  with a coordination number of 4 was present in three compositions: 5%  $Al_2O_3+95\% SiO_2$ , 10%  $Al_2O_3+90\% SiO_2$  and 25%  $Al_2O_3+75\% SiO_2$ . The maximum acidity was observed

Card 1/3



ACCESSION NR: AP4044387

for compositions with a maximum content of tetracoordinated  $Al^{+3}$  and  $Hg^{+2}$ , respectively.  $ZrO_2+SiO_2$  has a maximum acidity at a composition close to the equimolecular. On the basis of the symbatic variation of the proton and aprotic acidities with catalyst composition, it can be assumed that the occurrence of acid centers is due to the same cause and is associated with the coordination of  $Al^{+3}$ ,  $Hg^{+2}$  and  $Zr^{+4}$  in the catalysts. The investigation of the anthracene absorption curves for  $TiO_2+SiO_2$  catalysts showed that if, after the adsorption of the anthracene molecules on the silicagel surface, oxygen is introduced (at 20 mm Hg) and heated in a closed system up to 100C, the temperature of adsorption of anthracene, a spectrum of brown heterogeneous oxidation products of anthracene is obtained. This shows the presence of surface atomic oxygen in  $TiO_2$ , which oxidizes the adsorbed molecules. The variation in intensity in the different spectra is due to the different concentration of acid centers on the surface of the catalysts and the nature of the interaction of the adsorbed cation radicals. "The authors thank M. S. Borisova and N. V. Akimova for supplying the catalyst samples, as well as A. N. Terenin and V. A. Dzis'ko for their exceptional attention to this investigation." Orig. art. has: 7 figures and 1 table.

ASSOCIATION: Nauchno-Issledovatel'skiy fizicheskii Institut Leningradskogo gosudarstvennogo universiteta Im. A. A. Zhdanova (Scientific Research Institute of Physics, Leningrad State University); Institut kataliza SO AN SSSR (Institute

Card: 2/3

ACCESSION NR: AP4044387

of Catalysis, SO AN SSSR)

SUBMITTED: 22Jan64

ENCL: 00

SUB CODE: IC, OP

NO REF SOV: 009

OTHER: 003

Card 3/3

L 11172-63 EPF(c)/EPR/EWP(j)/EWT(m)/BDS--Ps-4/Pr-4/Pc-4--RM/WW/JW

ACCESSION NR: AP3002796

S/0051/63/014/006/0827/0829

AUTHOR: Kholtmogorov, V. Ye.; Baranov, E. V.

TITLE: EPR spectra of the products of photo-oxidation of diphenylamine in frozen solutions at 77°K

SOURCE: Optika i spektroskopiya, v. 14, no. 6, 1963, 827-829

TOPIC TAGS: photo-oxidation of diphenylamine, electron paramagnetic resonance, absorption

ABSTRACT: The purpose of the work was to investigate the products of photo-oxidation of diphenylamine (DPA) in different solvents at 77°K; the solvents used were a 2 to 1 alcohol-ether mixture, toluene (toluene solutions were also used at 20°) and sulfuric acid. The concentrations were 10 sup -2 mole/liter. The absorption spectra were recorded on an SF-2 spectrophotometer; the electron paramagnetic resonance spectra on a RE-1301 radiofrequency spectrometer. The solutions were not outgassed. Quartz containers were employed. Comparison of the absorption and EPR spectra of the colored products of DPA photo-oxidation made it possible to identify unambiguously a number of free radicals and ions. There were repeated the experiments of G. N. Lewis and D. Lipkin (J. Am. Chem. Soc., 64, 2801, 1942)

Card 1/2

L 11172-63

ACCESSION NR: AP3002796

3

which showed that a DPA solution in alcohol-ether mixture acquires a purple color, which weakens with further irradiation; the solution gradually turns green (peak at 690 mmicrons); its blue phosphorescence fades and white fluorescence appears. The EPR spectra disclose the presence of ethanol radicals. Lewis and Lipkin identified the substance absorbing at 690 mmicrons as the DPA ion; the present measurements confirm this and indicate that the absorption at 460 mmicrons is due to the diphenylnitrogen radical. The EPR spectra are reproduced and described. "The authors are grateful to A. N. Terenin, under whose guidance the work was performed, and to Ye. I. Kotov for supplying the aluminosilicate catalysts with adsorbed DPA." Orig. art. has: 1 figure.

7

ASSOCIATION: none

SUBMITTED: 11Jan63

DATE ACQD: 15Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 006

OTHER: 002

Card

1b/wmw  
2/2

ACCESSION NR: AP4043023

S/0051/64/017/002/0298/0299

AUTHORS: Kholmogorov, V. Ye.; Shablya, A. V.

TITLE: EPR investigation of the products of dark reduction of phthalocyanines by metallic sodium

SOURCE: Optika i spektroskopiya, v. 17, no. 2, 1964, 298-299

TOPIC TAGS: phthalocyanine, sodium, electron paramagnetic resonance, absorption spectrum

ABSTRACT: This is a continuation of earlier research (A. V. Shablya, A. N. Terenin, Opt. i spektr. v. 9, 533, 1960) on the ion-radical of phthalocyanine of magnesium (MgPhc). All experiments were carried out in vacuum ( $10^{-4}$ -- $10^{-5}$  mm Hg) with MgPhc solutions in tetrahydrofuran at concentrations  $10^{-3}$ -- $10^{-4}$  m/l. A special cuvette made it possible to measure the absorption spectra and the electron paramagnetic resonance (EPR). Metallic sodium in the form of a mirror was

Card 1/3

ACCESSION NR: AP4043023

produced in the same cuvette by thermal decomposition of sodium azide under continuous evacuation. The apparatus had a concentration sensitivity  $5 \times 10^{-12}$  mole and was calibrated against a DPPH EPR signal. The tests showed that the product produced after the interaction between the MgPhc and the sodium has an absorption spectrum with maxima at 420, 530, 570, 640, and 950 nm (curve 1 of Fig. 2), in agreement with the earlier results. All the maxima disappeared when oxygen was admitted into the reaction tube (curve 3). A similar result is obtained if no care is taken to eliminate the absorbed water prior to the experiment (curve 2). The results indicate that two products result from the reaction, of which only one produces an EPR signal. The factors contributing to each product are briefly discussed. Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 08Oct63

ENCL: 01

SUB CODE: OP

NR REF SOV: 004

OTHER: 003

Card 2/3

ACCESSION NR: AP4043023

ENCLOSURE: 01

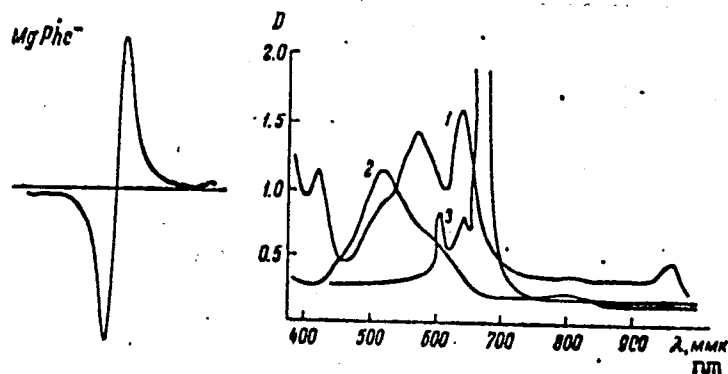


Fig. 1 (left). EPR signal of negative ion-radical of  $\text{MgPhc}^-$  in tetrahydrofuran ( $10^{-4}$  m/l).  $g = 2.003$ ,  $H = 5$  Oersted

Fig. 2.(right). Absorption spectra of  $\text{MgPhc}$  following interaction with metallic sodium in a tetrahydrofuran solution.

Card 3/3

PISKUNOV, A.K.; Kholmogorov, V.Ye.; Shigorin, D.N.; Vereyn, N.V.;  
OZEROVA, G.A.

Mechanism underlying the formation of radicals during  
photoirradiation of triphenylamine ethanol solutions frozen  
at 77° K. Dokl. AN SSSR 154 no.4:910-913 F '64.  
(MIRA 17:3)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova. Predstav-  
leno akademikom A.N. Tereninym.



KARAKCHIYEV, L.G.; BARACHEVSKIY, V.A.; Kholmogorov, V.Ye.

Spectral investigation of the acidity of silicate catalysts.

Kin. i kat. 5 no.4:630-636 J1-Ag '64.

(MIRA 17:11)

1. Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo gosudarstvennogo universiteta imeni Zhdanova i Institut kataliza Sibirskogo otdeleniya AN SSSR.

BARACHEVSKIY, V.A.; KHOLMOGOROV, V.Ye.; BELOTSEKOVSKIY, G.M.; TEREININ, A.N.

Spectral study of the specific nature of an active  $Al_2O_3$  surface.  
Kin. i kat. 6 no.2:258-268 Mr-Apr '65. (MIRA 18:7)

1. Leningradskiy gosudarstvennyy universitet i Leningradskiy tekhnologicheskoy institut imeni Lensovetu.

L 29932-65 EWP(j)/EWT(m) Pc-4 RM

ACCESSION NR: AP5004800

S/0020/65/160/002/0394/0397

25  
21  
B

AUTHOR: Meshkov, A.M.; Kholmogorov, V. Ye.

TITLE: Effect of the state of aggregation of organic dyes on their photoconducting and photoparamagnetic (ESR) properties

SOURCE: AN SSSR. Doklady, v. 160, no. 2, 1965, 394-397

TOPIC TAGS: organic dye, dye aggregation, photosemi-conducting property, photoparamagnetic property, electron paramagnetic resonance, triphenylmethane dye, xanthene dye

15

ABSTRACT: The article deals with the effect of the state of aggregation of triphenylmethane dyes (crystal violet, brilliant green, malachite green) and xanthene dyes (rhodamine 6G and rhodamine B) on their photoconducting and photoparamagnetic properties. Amorphous and polycrystalline layers of these dyes deposited on glass were investigated. The experiments showed that photoinduced ESR signals (PIS ESR) do not arise in dyes with a sudden photocurrent relaxation and are observed only in  $n$ -type dyes with a slow photocurrent relaxation. The temperature dependence of the rate of appearance and disappearance of PIS ESR was investigated on amorphous layers, and thermal activation energies  $E_a$  and deactivation energies  $E_d$  of PIS ESR and activation

Card 1/2

L 29932-65

ACCESSION NR: AP5004600

energies  $E_p$  of photoconductivity were determined. A theoretical interpretation of the phenomena observed is given. "The authors thank A. N. Terenin for suggesting the topic and for valuable comments, and also Ye. K. Putsevko, I. A. Akimov, and A. T. Vartanyan for a helpful review of the results obtained." Orig. art. has: 4 figures and 1 table. 4 X

ASSOCIATION: none

SUBMITTED: 27Mar64

ENCL: 00

SUB CODE: MT, EM

NO REF SOV: 009

OTHER: 008

Card 2/2

LODIN, V.Ya.; Kholmogorov, V.Ye.; Terenin, A.N., akademik

Absorption spectra and electron paramagnetic resonance of quinones  
adsorbed from the gaseous phase on the surface of oxides. Dokl. AN  
SSSR 160 no.6:1347-1350 F '65. (MIRA 18:2)

L 1364-66 EWT(m)/EPF(c)/EWP(j)/EWA(c) RPL WW/RM

ACCESSION NR: AP5020834

UR/0020/65/163/004/0935/0938

AUTHOR: Pimenov, Yu. D.; Kholmogorov, V. Ye.; Terenin, A. N. (Academician)

TITLE: Spectral detection of molecular anion radicals during adsorption of vapors of electron acceptor molecules on oxides

SOURCE: AN SSSR. Doklady, v. 163, no. 4, 1965, 935-938

TOPIC TAGS: spectrometry, absorption spectrum, anion, EPR spectrum, electrochemistry, electron acceptor

ABSTRACT: The absorption and EPR spectra were obtained for several electron acceptor molecules adsorbed on ZnO, TiO<sub>2</sub> and MgO to determine whether molecular anion radicals were formed. Vapors of p-benzoquinone, fluoranil, chloranil, bromanil, trinitrobenzene and tetracyanoethylene were admitted for adsorption onto samples of the oxides under 10<sup>-5</sup> mm Hg vacuum. The benzoquinone and chloranil anion radicals were identified from their absorption maxima in the 450 millimicron region and from the accompanying EPR signals. Absorption

Card 1/2

L 1364-66

ACCESSION NR: AP5020834

2  
bands of the anion semiquinones shifted toward the long wave as the affinity of the molecules for electrons increased. The broad absorption bands in the 500-700 millimicron region intensified with increased surface concentration and were accompanied by broadened and intensified EPR signals. They were attributed either to the transfer of charge in binary associations formed from anion radicals and neutral quinone molecules or to dimers of two anion radicals having no paramagnetism. The spectra for tetracyanoethylene were interpreted to be analogous to those of the quinones. The spectra of trinitrobenzene indicated reaction of the unpaired electron with the nucleus of the nitrogen atom of the nitro group, and the broad band was ascribed to intermolecular charge transfer. Orig. art. has: 4 figures and 1 table

ASSOCIATION: None

SUBMITTED: 22Mar65

ENCL: 00

SUB CODE: OP, NP

NR REF SOV: 004

OTHER: 015

dg  
Card2/2

NYL'KOV, V.V.; KUCHENKOV, V.B.; TEREKIN, A. I.; NIKOL'SKIY

The-photon character of a sensitized photochemical decomposition of methyl iodide as detected by means of electron paramagnetic resonance. Dokl. AN SSSR 199 no.2:356-359 N 1965.  
(MIRA 18:11)



L 18912-66 EWT(m)/BWP(j)/T/ETC(m)-6 DS/WW/RM

ACC NR: AP6008056

SOURCE CODE: UR/0020/66/166/004/0913/0916

AUTHOR: Ryl'kov, V. V.; Kholmogorov, V. Ye.; Terenin, A. N. (Academician)

ORG: none

74455  
TITLE: Double photosensitization of the dissociation of organic molecules at 77°K (ternary systems) 54 B

SOURCE: AN SSSR. Doklady, v. 166, no. 4, 1966, 913-916

TOPIC TAGS: photosensitization, photolysis, electron paramagnetic resonance, free radical, electron spin resonance

ABSTRACT: The possibility of achieving a double spectral sensitization of the dissociation of organic molecules at 77°K was checked experimentally on ternary systems (solid solutions at 77°K) consisting of two spectral sensitizers and a third component which underwent photolysis into radicals, viz: (1) acetophenone + naphthalene + CH<sub>3</sub>I; (2) benzophenone + naphthalene + CH<sub>3</sub>I; (3) acetophenone + biphenyl + CH<sub>3</sub>I; (4) benzophenone + biphenyl + CH<sub>3</sub>I; (5) acetophenone + naphthalene + tert-butyl alcohol. The frozen solutions were illuminated with light from a mercury lamp, and their electron spin resonance spectra were taken. The results lead to the

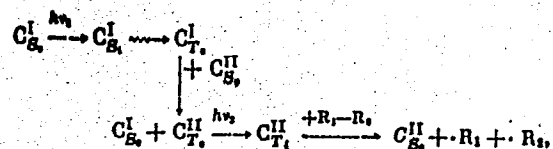
Card 1/2

UDC: 541.14 + 538.113

L 18912-66

ACC NR: AP6008056

following mechanism of double photosensitization of the rupture of the C-I bond in  $\text{CH}_3\text{I}$  or the C-C bond in tert-butyl alcohol:



where  $\text{C}^{\text{I}}$  and  $\text{C}^{\text{II}}$  are the first and second sensitizer;  $R_1-R_2$  is the molecule of photolyzed substrate;  $S_i$  and  $T_i$  are designations of singlet and triplet states of the sensitizers ( $i = 0, 1, 2, 3, \dots$ ). This mechanism suggests that electron energy is transferred from the sensitizer, excited to high triplet states  $T$ , to the substrate molecule. It is concluded that the ESR method, which records the accumulation of free radicals in the course of sensitized photolysis of the substrate, is a unique detector-counter of the number of successful cases of energy transfer leading to the breakdown of the substrate molecule and to the formation of the corresponding radicals, and thus permits a study of such processes. Orig. art. has: 2 figures, 1 formula.

SUB CODE: 07, 09 SUBM DATE: 13Nov65/

ORIG REF: 007/

OTH REF: 002

Card 2/2 *mc*

TSVETAYEV, A.A.; KHMELIK, Ye.L.; KHOLMOGOROVA, E.M.; MINAYEVA, L.S.

Resources in ferrous scrap metal and their use in the U.S.S.R.  
Sbor. trud. TSNIICHM no.45:164-171 '65. (MIRA 18:9)

BARK, S.Ye.; KUVSHINNIKOV, V.M.; KHOLMOGOROVA, L.V.

Radiating pipe as heater for controlled atmosphere furnaces.

Metalloved. i term. obr. met. no.6:53-59 Je '63.

(MIRA 16:6)

(Furnaces, Heating—Protective atmospheres)

(Heat—Radiation and absorption)

KHOLMOGORTSEV, Yu. P.

122-4-8/29

AUTHOR: Margulis, D.K., Candidate of Technical Sciences and  
Kholmogortsev, Yu.P., Engineer.

TITLE: Cutting force and tool life relations in high speed  
drilling of cast iron. (Silovye i stoykostnye zavisimosti  
pri skorostnom sverlenii chuguna.)

PERIODICAL: "Vestnik Mashinostroeniya" (Engineering Journal), 1957,  
No.4, pp. 41 - 47 (U.S.S.R.)

ABSTRACT: The tests were carried out by the cutting laboratory of  
the Chelyabinsk Tractor Plant (Chelyabinskiy Traktorniy Zavod)  
with carbide-tipped twist drills. BK8 carbide tips were copper  
brazed in a barium chloride bath simultaneously heating the  
shank for quenching. A vertical drilling machine, model 2A150  
(made by the plant "Imeni Lenina" of Sterlitamak) was modern-  
ised to obtain 48 speed steps up to 3 200 r.p.m. and 18 feed  
steps between 0.1 and 2.64 mm/rev. The drill point was ground  
to an angle of  $118^\circ$  with a front clearance angle of  $16^\circ$ . The  
tests were carried out on grey cast iron, C4 21-40 of 180-200  
Brinell hardness. Experimental curves are given (straight  
lines) in double logarithmic presentation plotting the axial  
force, the torque and the power against the rate of feed per  
revolution at different cutting speeds. The axial force is  
1/3 proportional to the 1.2 power of the drill diameter. The axial  
force and power are also plotted against the drill dia. The torque

Cutting force and tool life relations in high speed drilling of cast iron. (Cont.)

is proportional to the 2.2 power of the drill diameter<sup>122-4-8/29</sup>. The exponents with which the rate of feed enters into the force formula vary between 0.7 and 0.9 when the cutting speed changes from 5 to 60 m/min; the same variation in the torque formula is 0.76 to 0.8 in the range of speeds between 60 and 90 m/min the proportionality factors in metric units are 35 for the axial force and 0.01 for the torque. These are considerably below the standard relationships recommended by ENIMS. The effect of thinning out the drill web was examined. It is pointed out that the thinning out type of sharpening in carbide-tipped drills leads to the formation of a large negative front clearance angle (up to minus 18°). It was found that contrary to the effect of thinning out in high speed steel drills, where positive front clearance angles are preserved, in carbide-tipped drills thinning out actually increases the aerial effort over the whole range of cutting speeds. The effect of the cutting speed on the axial force shows a characteristic dip around 40 m/min. The effect is negligible between about 80 and 160 m/min. The effect of wear on the rear cutting edge upon the axial force and torque coefficients is given in a table; for amounts of wear between 0.1 and 0.7 mm the factors

2/3

Cutting force and tool life relations in high speed drilling of cast iron. (Cont.)

122-4-8/29

change from 1.02 to 1.6 and from 1.02 to 2.0, respectively. The hardness changes the factors from 0.58 at 130 Brinell to 1.34 at 250 Brinell for the axial force and from 0.83 at 130 Brinell to 1.15 at 250 Brinell for the torque. Tool life tests were carried out assuming the bluntness criterion to be 0.2 mm wear at the rear cutting edge. In high speed drilling, when the removal of heat is a major factor, the effect of drill diameter on tool life is greater than in ordinary drilling because the compensating effects of greater stiffness and less vibrations are absent. Tool lives are plotted in double logarithmic graphs against diameter, rate of feed and cutting speed. The cutting speed is 34.2 times the 0.45 power of the diameter divided by the 0.2 power of the tool life and the 0.3 power of the rate of speed. It is inversely proportional to the 0.7 power of the hardness of the machined material. There are 3 Slavic references, 18 figures, including 13 graphs.

3/3

AVAILABLE:

KHOLMOGORTSEV, Yu. P.

Introducing new technological processes based on the use of  
advanced metal-cutting tools. Biul. tekhn.-ekon. inform. Gos.  
nauch.-issl. inst. nauch. i tekhn. inform. 18 no. 12:32-34  
D '65. (MIRA 19:1)



KHOLMOGORTSEV, Yuriy Pavlovich; SVET, Ye.B., red.

[High-efficiency drilling] Vysokoproizvoditel'noe sver-  
lenie. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1963.  
95 p. (MIRA 17:9)

*Kholmogoritsa, I. B.*  
Rate of growth of hydrargillite in aluminate solutions along the crystalline facets. I. A. N. Lyapunov and I. B. Kholmogoritsa. *Zhur. Priklad. Khim.* 30, 1308-10 (1957).  
The rate of growth of hydrargillite grains in aluminate solutions along the crystal facets, the growths of individual particles followed by agglomeration being eliminated, was analyzed mathematically. The development was based on the differential equations of the particle-distribution curves of suspensions before and after the expt. Integral equations for several limiting conditions were developed. I. B.

2

A-U Aluminum-Magnesium dust.

Kholmogortseva, YEP.

3

4E4C

Rate of growth of hydrargillite in aluminate solutions along the crystalline facets. II. A. N. Lyapunov and B. P. Kholmogortseva. *Zhur. Priklad. Khim.* 36, 1933-42 (1957), cf. C.A. 52, 5419f. — The rate of growth of hydrargillite crystals in aluminate solns. of the same degree of satn. increased with the temp. from 60 to 65° and with the degree of satp. The effect of the latter was more pronounced at 65° than at 60°. I. Benicewicz.

11

KHOLMOGORTSEVA, Ye. P.

137-58-5-9274

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 70 (USSR)

AUTHORS: Lyapunov, A.N., Kholmogortseva, Ye.P.

TITLE: On the Optimal Value of the Priming Ratio in the Process of Decomposition of an Aluminate Solution (Ob optimal'noy velichine zatravoch'nogo otnosheniya pri dekompozitsii alyuminatnogo rastvora)

PERIODICAL: Tr. Vses. alyumin.-magn. in-ta, 1957, Nr 39, pp 100-108

ABSTRACT: The present method of computing the optimal value for the priming ratio is based on experiments conducted in order to determine how the degree of decomposition of aluminate solutions is affected by their module, by the concentration of the  $\text{Na}_2\text{O}$ , and by the amount of priming precipitate.

P. K.

1. Aluminate solutions--Decomposition 2. Sodium oxides  
--Applications

Card 1/1